CLAIMS

1. A self-cooling beverage package device having:

- a first cavity (10) containing a beverage for consumption,

- a second cavity (20) forming a heat exchanger and containing a refrigerant liquid and its vapour,

- a third cavity (30) containing adsorbent (31) for pumping of said vapour

- means (50) for putting said second cavity into communication with said third cavity for operation of the device,

characterised in that the third cavity (30) is provided with an external thermal insulation layer (35) providing a physiological protection against burns and designed such that the heat flow from the adsorbent (31) through the outside wall of the third cavity (30) is larger or equal to the heat flow from the adsorbent (31) towards the second (20) and first (10) cavities during operation of the device.

2. A self-cooling beverage package according to Claim 1, characterised in that the temperature of the external surface of the insulation layer (35) rises to more then 70°C during operation of the device.

3. A self-cooling beverage package according to one of Claims 1 to 2, characterised in that the thermal insulation layer (35) has a thermal conductance less than or equal to 500 $W.m^{-2}.K^{-1}$.

4. A self-cooling beverage package according to Claim 3, characterised in that the thermal conductance of the insulating layer is between 20 and 60 $W.m^{-2}.K^{-1}$.

5. A self-cooling beverage package according to one of the preceding claims, characterised in that the thermal insulation layer (35) has a thickness between 0.5 and 1.5 mm.

6. A self-cooling beverage package according to one of the preceding claims, characterised in that the thermal insulation layer (35) has a variable thickness.

7. A self-cooling beverage package according to Claim 1, characterised in that the thermal insulation layer (35) includes a material melting at a temperature between 40°C and 80°C.

8. A self-cooling beverage package according to Claim 7, characterised in that the thermal insulation layer consists of at least two layers, one of them including the melting material.

9. A self-cooling beverage package according to one of the claims 7 to 8, characterised in that the thermal insulation layer (35) has a thickness between 3 and 10 mm.

10. A self-cooling beverage package according to one of Claims 1 to 9, characterised in that the thermal insulation layer (35) surrounds the third cavity (30) consisting of a metal container.

11. A self-cooling beverage package according to one of Claims 1 to 10, characterised in that the thermal insulation layer (35) extends around the first cavity (10).

12. A self-cooling beverage package according to one of the preceding claims, characterised in that the thermal insulation layer (35) has a thermochromic label (36).

13. A self-cooling beverage package according to Claim 12, characterised in that the thermochromic label (36) is disposed opposite the third cavity (30).

14. A self-cooling beverage package according to Claim 12, characterised in that the thermochromic label (36) is disposed opposite the first cavity (10).

15. A self-cooling beverage package according to one of the preceding claims, characterised in that the thermal insulation layer (35) consists of cardboard and/or paper and/or plastic.